

Simplify by using the distributive property and combining the like terms in this expression.

13. $2(5x - 8) - 9x + 7$ $10x - 9x = 1x$
 $10x - 16 - 9x + 7$ $-16 + 7 = -9$
 $x - 9$

Learning Target 3: Reasoning (22 points)

Fill in the missing numbers for the patterns. Look for **differences**. Explain what the rule is.

14.) 4, 9, 14, 19, 24, 29, 34
 $\swarrow \swarrow \swarrow \swarrow \swarrow$
 $+5 +5 +5 +5 +5$

Rule: Add 5

15.) 4, 6, 10, 16, 24, 34, 46, 60
 $\swarrow \swarrow \swarrow \swarrow \swarrow \swarrow$
 $+2 +4 +6 +8 +10 +12 +14$

Rule: Add the next even number.

16.) What **mistake** did I make while simplifying this expression? Original Problem: $7(3x + 1) - x$

$20x + 7$ does not equal $27x$.

My Work: $21x + 7 - x$

$20x + 7$

$27x$

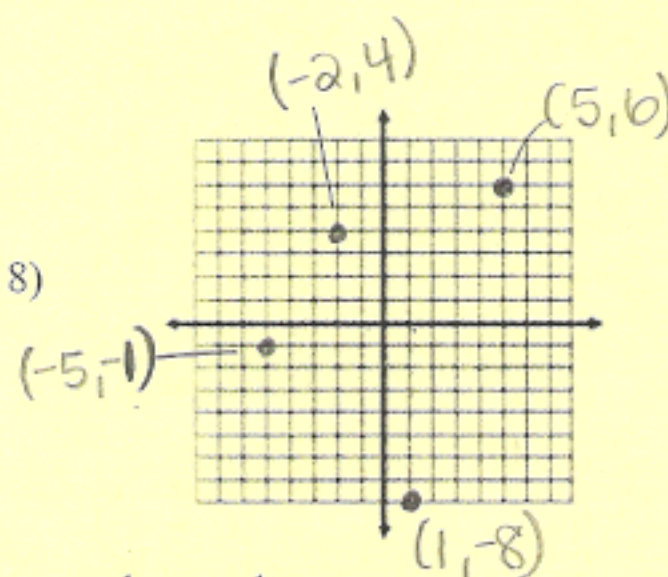
You cannot combine them
because they're not like terms.

17.) Complete the table.

	What are the variables	What is the constant	How many terms?
$3m + 1$	<u>m</u>	<u>1</u>	<u>2</u>
$9 + 2y - 4z$	<u>y, z</u>	<u>9</u>	<u>3</u>
$-a + 5b + 2c - 9$	<u>a, b, c</u>	<u>-9</u>	<u>4</u>
$9p$	<u>p</u>	<u>none</u>	<u>1</u>

Learning Target 4: Multiple Representations (14 points)

17.) Plot these points on the coordinate plane: (5, 6) (-2, 4) (-5, -1) (1, -8)



18.) Use the equation $y = -3x + 2$ to fill in the table. Then plot your points on the graph.

Input x	Work $-3x + 2$	Output y
-2	$-3(-2) + 2$	8
-1	$-3(-1) + 2$	5
0	$-3(0) + 2$	2
1	$-3(1) + 2$	-1
2	$-3(2) + 2$	-4

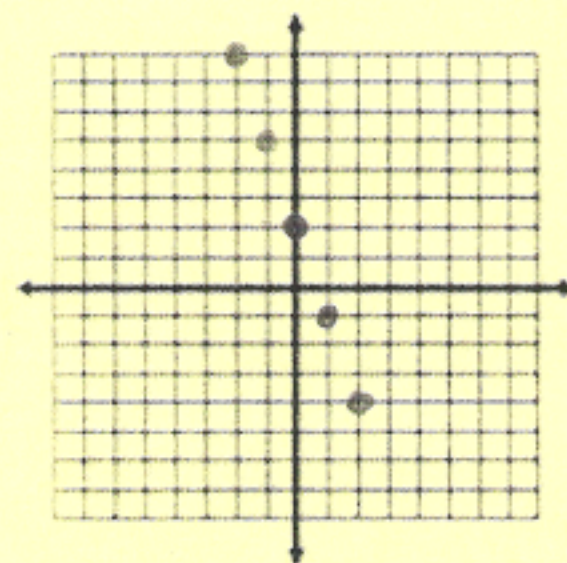
(-2, 8)

(-1, 5)

(0, 2)

(1, -1)

(2, -4)



19.) What patterns do you see on the table and in the graph?

The table goes down 3 each time. On the graph, the points make a straight line. Each time you go right 1, you go down 3.